REMARKS

In response to the Office Action mailed January 24, 2005, reconsideration and allowance of the above-identified application are respectfully requested. Claims 3-14 remain pending.

Applicant notes with appreciation the Examiner's acknowledgement that the certified copy of the foreign priority document has been received.

The first paragraph of the Office Action indicates that the Information Disclosure Statement filed on October 9, 2003 fails to comply with 37 CFR §1.98(a)(3) because it does not include a concise explanation of relevance of each patent listed that is not in the English language. In particular, the Office Action states that documents AF-AM have not been considered because the Information Disclosure Statement does not include a concise explanation of relevance of these documents.

Applicant notes that the Information Disclosure Statement filed on October 9, 2003, included a German language search report and a translation of the generic portions of the search report. It is respectfully submitted the generic translation provides sufficient information for determining the degree of relevance found by the German Patent Office for each of the cited documents. Nevertheless, to ensure consideration of these documents, Applicant is submitting an Information Disclosure Statement, including a translation of the German language search report, and copies of documents AF-AM submitted with the previous Information Disclosure Statement. Accordingly, Applicant respectfully requests consideration of these documents, and return of an Examiner-initialed copy of the form PTO-1449, submitted with the Information Disclosure Statement, indicating such consideration.

In the third paragraph of the Office Action claims 3, 6-8, 11 and 12 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent Application Publication No. US 2002/0013646 to Nishizaki et al. ("Nishizaki") in view of U.S. Patent No. 6,324,445 to Tozu et al. ("Tozu"). This ground of rejection is respectfully traversed.

The combination of Nishizaki and Tozu does not render Applicant's claim 3 unpatentable because the combination does not disclose or suggest all of the elements of Applicant's claim 3. For example, the combination of Nishizaki and Tozu does not disclose or suggest that "in the event of a controlled braking operation, the control signal is formed by means of at least one amplification factor that differs from an amplification factor that is used in the unbraked driving condition," as recited in Applicant's claim 3.

Nishizaki discloses a motor vehicle steering system for controlling driving of a steering mechanism of a motor vehicle. However, as acknowledged in the Office Action, Nishizaki does not disclose that "in the event of a controlled braking operation, the control signal is formed by means of at least one amplification factor that differs from an amplification factor that is used in the unbraked driving condition," as recited in Applicant's claim 3.

To remedy the above-identified deficiency of Nishizaki, the Office Action cites Tozu. Tozu is directed to setting a zero point of a yaw rate sensor, such that a yaw rate of a vehicle can be detected on the basis of the zero point. (Col. 2, lines 13-15). However, Tozu does not disclose or suggest forming a signal, which controls steering movement which counteracts an undesired yawing motion, using different amplification factors for different driving conditions.

Nevertheless, the Office Action cites figures 1 and 4 and columns 2-5 of Tozu as allegedly disclosing that "the control signal when the vehicle is driving (i.e. the vehicle speed exceeds certain value) is different that the control signal when the vehicle is stopping (i.e., during braking operation or when parking switch is on)." Figure 1 illustrates an apparatus for detecting a yaw rate of a vehicle and Figure 4 illustrates a subroutine for calculating an actual yaw rate. In the subroutine of Figure 4, if a parking switch is on and a vehicle speed is zero, a temporary zero point is set. (Step 202). If the aforementioned conditions are not met or after the temporary zero point is set, it is determined whether the temporary zero point should be set for the zero point, based on a number of factors including vehicle speed. (Step 204). The zero point is subtracted from the measured yaw rate to provide the actual yaw rate. (Step 210). The actual yaw rate is subtracted from some values to determine vehicle slip angle and vehicle slip angular velocity, which is used for steering control. (Col. 7, lines 1-18 and Figure 1). However, Tozu does not disclose that the actual yaw rate is used as an amplification factor. Accordingly, the portion of Tozu relied upon by the Office Action does not disclose or suggest that "in the event of a controlled braking operation, the control signal is formed by means of at least one amplification factor that differs from an amplification factor that is used in the unbraked driving condition," as recited in Applicant's claim 3.

Because Nishizaki and Tozu each do not disclose or suggest that "in the event of a controlled braking operation, the control signal is formed by means of at least one amplification factor that differs from an amplification factor that is used in the unbraked driving condition," the combination cannot disclose or suggest such. Accordingly, the combination of Nishizaki and Tozu cannot render Applicant's claim 3 unpatentable.

Claim 7 recites a yaw rate control device for controlling yawing movement of a vehicle. Specifically, claim 7 recites "means for calculating a control signal for controlling vehicle steering as a function of said deviation signal, using at least one amplification factor ... wherein the at least one amplification factor has a value that varies as a function of whether or not a vehicle braking operation is currently activated." Accordingly, claim 7 is patentably distinguishable over Nishizaki in view of Tozu for similar reasons to those discussed above with regard to claim 3.

Claim 11 recites a method for controlling yawing movement of a vehicle, which includes "calculating a control signal as a function of a difference between said signals that are indicative of the desired yaw rate and the actual rate, using at least one amplification factor" and "varying a value of said amplification factor as a function of whether or not a vehicle braking operation is currently activated." Accordingly, claim 11 is patentably distinguishable over Nishizaki in view of Tozu for similar reasons to those discussed above with regard to claim 3.

Claims 6, 8 and 12 variously depend from claims 3, 7, or 11. Accordingly, for the reasons stated above with regard to claims 3, 7, and 11, claims 6, 8 and 12 are patentably distinguishable over the combination of Nishizaki and Tozu.

For at least those reasons stated above, it is respectfully requested that the rejection of claims 3, 6-8 and 11-12 as allegedly being unpatentable over Nishizaki in view of Tozu be withdrawn.

In the fourth paragraph of the Office Action claims 3, 6-8, 11 and 12 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Nishizaki in view of U.S. Patent No. 6,155,655 to Matsuno ("Matsuno"). This ground of rejection is respectfully traversed.

The combination of Nishizaki and Matsuno does not render Applicant's claim 3 unpatentable because the combination does not disclose or suggest all of the elements of Applicant's claim 3. For example, the combination of Nishizaki and Matsuno does not disclose or suggest that "in the event of a controlled braking operation, the control signal is formed by means of at least one amplification factor that differs from an amplification factor that is used in the unbraked driving condition," as recited in Applicant's claim 3.

As discussed above, the Office Action acknowledges that Nishizaki does not disclose that "in the event of a controlled braking operation, the control signal is formed by means of at least one amplification factor that differs from an amplification factor that is used in the unbraked driving condition," as recited in Applicant's claim 3.

To remedy the above-identified deficiency of Nishizaki, the Office Action cites Matsuno. Matsuno discloses a yaw braking force control system. An electronic control apparatus 10 outputs a control signal, to a brake drive apparatus 1, indicating whether a brake should be applied to a particular wheel or no brake should be applied to any wheel. (Figure 1). The electronic control apparatus 10 uses the following inputs to generate the brake control signal: right front wheel speed sensor 6fr; left front wheel sensor 6fl; right rear wheel sensor 6rr; left rear wheel sensor 6rl; yaw rate sensor 8; steering wheel angle sensor 7; and lateral acceleration sensor 9. The electronic control apparatus 10 does not receive any information about whether there is a controlled braking operation or an unbraked driving condition. Accordingly, Matsuno does not disclose or suggest disclose "in the event of a controlled braking operation, the control signal is formed by means of at least one amplification factor that differs from an amplification factor that is used in the unbraked driving condition," as recited in Applicant's claim 3.

Nevertheless, the Office Action relies upon the yaw rate gain of Matsuno as corresponding to the amplification factor recited in Applicant's claim 3. As illustrated in equation 1 of Matsuno, the yaw rate gain is calculated based on the wheelbase of the vehicle L, the stability factor of the vehicle A_o, and the vehicle speed V. However, Matsuno does mention that the yaw rate gain should be different in the braking condition verses the non-braking condition. Accordingly, Matsuno cannot disclose or suggest the use of one yaw rate gain in controlled braking operations and a different yaw rate gain used in an unbraked driving condition, as would be required to render claim 3 obvious using the Office Action's interpretation of Matsuno.

Additionally, it is respectfully submitted that there is no motivation to combine Nishizaki and Matsuno in the manner described in the Office Action. Nishizaki is directed to controlling a steering system while Matsuno is directed to controlling a brake system. Matsuno does not indicate that the disclosed system for controlling a brake system could be used to control a steering system, such as that disclosed by Nishizaki. Moreover, Matsuno does not disclose or suggest that the disclosed system for controlling a braking system would improve the control stability of a vehicle when applied to control a steering system, as relied upon by the Office Action as motivation for one skilled in the art to combine Nishizaki and Matsuno.

Because the combination of Nishizaki and Matsuno does not disclose or suggest all of the elements of claim 3, and because one skilled in the art would not have been motivated to combine Nishizaki and Matsuno in the manner described in the Office Action, the combination cannot render claim 3 unpatentable.

Claim 7 recites a yaw rate control device for controlling yawing movement of a vehicle. Specifically, claim 7 recites "means for calculating a control signal for controlling vehicle steering as a function of said deviation signal, using at least one amplification factor ... wherein the at least one amplification factor has a value that varies as a function of whether or not a vehicle braking operation is currently activated." Accordingly, claim 7 is patentably distinguishable over Nishizaki in view of Matsuno for similar reasons to those discussed above with regard to claim 3.

Claim 11 recites a method for controlling yawing movement of a vehicle, which includes "calculating a control signal as a function of a difference between said signals that are indicative of the desired yaw rate and the actual rate, using at least one amplification factor" and "varying a value of said amplification factor as a function of whether or not a vehicle braking operation is currently activated." Accordingly, claim 11 is patentably distinguishable over Nishizaki in view of Matsuno for similar reasons to those discussed above with regard to claim 3.

Claims 6, 8 and 12 variously depend from claims 3, 7, or 11. Accordingly, for the reasons stated above with regard to claims 3, 7, and 11, claims 6, 8 and 12 are patentably distinguishable over the combination of Nishizaki and Matsuno.

For at least those reasons stated above, it is respectfully requested that the rejection of claims 3, 6-8 and 11-12 as allegedly being unpatentable over Nishizaki in view of Matsuno be withdrawn.

In the fifth paragraph of the Office Action claims 4-5, 9-10, 13 and 14 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Nishizaki in view of Tozu or Matsuno, and further in view of U.S. Patent No. 5,386,365 to Nagaoka ("Nagaoka"). This ground of rejection is respectfully traversed.

As discussed above, the combination of Nishizaki and Tozu, and the combination of Nishizaki and Matsuno do not disclose or suggest all the elements of Applicant's claims 3, 7, and 11. It is respectfully submitted that Nagaoka does not remedy the above-identified deficiencies of the combinations of Nishizaki and Tozu, or Nishizaki and Matsuno with regard to Applicant's claims 3, 7 and 11. Hence, the combination of Nishizaki, Tozu and Nagaoka, or Nishizaki, Tozu, and Nagaoka cannot render Applicant's claims 3, 7 and 11 obvious.

Claims 4-5, 9-10, 13 and 14 variously depend from claims 3, 7, or 11. Accordingly, these claims are patentably distinguishable over Nishizaki in combination with Tozu and Nagaoka, or Nishizaki in combination with Matsuno and Nagaoka.

For at least those reasons stated above, it is respectfully requested that the rejection of claim 4-5, 9-10 and 13-14 as allegedly being unpatentable over the combination of Nishizaki, Tozu and Nagaoka, or Nishizaki, Matsuno and Nagaoka be withdrawn.

All outstanding rejections have been addressed. It is respectfully submitted that the present application is in immediate condition for allowance. Notice to this effect is earnestly solicited. If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #080437.52614US).

Respectfully submitted,

Date: June 9, 2005

Gary R. Edwards
Registration No. 31,824
Stephen W. Palan
Registration No. 43,420

CROWELL & MORING LLP
Intellectual Property Group
P.O. Box 14300
Washington, DC 20044-4300
Telephone No.: (202) 624-2500
Facsimile No.: (202) 628-8844

Attachments

363407v2